ABSTRACT OF THE DISCLOSURE

A network switch including at least one data port interface supporting a plurality of data ports, at least one stack link interface configured to transmit data between the network switch and other network switches, and a CPU interface configured to communicate with a CPU. A memory management unit in communication with the at least one data port interface and the at least one stack link interface is provided along with a memory interface in communication with the at least one data port interface and the at least one stack link interface, wherein the memory interface is configured to communicate with a memory. A communication channel is provided for communicating data and messaging information between the at least one data port interface, the at least one stack link interface, the memory interface, and the memory management unit, wherein the memory management unit is configured to route data received from each of the at least one data port interface and the at least one stack link interface to the memory interface.